



NASA Technology Days: Partnering to Infuse Technology

Agency Research Makes Economic Impact

Hundreds of people poured through the Cleveland Public Auditorium and Conference Center during NASA Technology Days, Nov. 28–30. They came with a sense of hope and enthusiasm that the technologies featured at the agency-sponsored event could improve their operations, reduce costs or build better products.

Nearly 100 mature NASA-funded technologies—relating to aerospace, advanced energy, automotive, innovative manufacturing and human health industries—were on display across 75 booths.

Staff from Glenn and NASA Headquarters' Office of the Chief Technologist hosted the 3-day event with support

Continued on page 2

Pictured, right: Energy and excitement abounded during STEM Day at the NASA Technology Showcase.



C-2012-5819

Photo by Marvin Smith

Center Director Shares 2012 Accomplishments at All Hands

On Dec. 10, Center Director Ray Lugo hosted his final All Hands Meeting as director of NASA Glenn Research Center from the Briefing Center at



C-2012-5932

Photo by Bridget Caswell

Lewis Field and broadcast live on Glenn TV to Plum Brook Station.

In his address, Lugo thanked employees for their support to him over the past 2 years and for their commitment to the NASA mission. He highlighted 2012 accomplishments from each directorate or office. The following are a few of the most significant highlights:

1. Parachute Testing

Glenn completed the experimental test program in the 10-by 10-Foot Supersonic Wind Tunnel to validate the design of the parachute deployment system for the European Space Agency ExoMars robotic planetary mission.

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Pictured, left: Center Director Lugo shares center accomplishments during his last All Hands meeting as center director.



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Holiday Gatherings Bring Cheer

Making Spirits Bright!

Last month, NASA Glenn employees took some time to celebrate the holiday season with one another.

On Dec. 13, Center Director Ray Lugo and his senior staff gathered with civil servant and contract employees in the Engineering Building at Plum Brook Station. They socialized while enjoying refreshments and good cheer.

The following morning, Dec. 14, Director Lugo hosted Lewis Field's 2012 Holiday Gathering featuring the "GRC's Got Talent" show in the Administrative Building auditorium. Master of Ceremonies Lance Foster, Research and Technology Directorate, introduced 10 employees who shared talents ranging from Irish dancing to a dramatic "spoonerism" reading of Mement C. Cloore's "A Visit by Naint Sick." The capacity-filled auditorium of civil servant and contract employees cheered on fellow workers and cast their ballots for their favorite acts.

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Pictured is a collection of photos from the Plum Brook gathering.



C-2012-7129

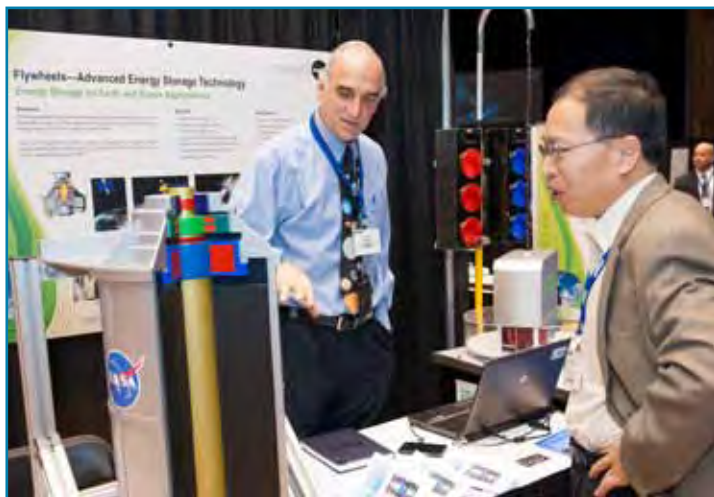


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C-2012-6090

Photos by Bridget Caswell



C-2012-5756

Photos by Marvin Smith



C-2012-6054



C-2012-5674

Above, top, Glenn engineers staff the fly-wheel technology booth, and, above: the aero chevron nozzle technology booth. Right: NASA Associate Director Lightfoot gives his keynote address.

Showcase Encourages Partnerships

Continued from page 1

from NASA's Langley Research Center and Goddard Space Flight Center. The team presented technology demonstrations, informational presentations and poster sessions to showcase NASA's cutting edge research and technology development.

Keynote speaker NASA Associate Director Robert Lightfoot joined in the opening day festivities with other NASA program officials to highlight the agency's upcoming technology initiatives. Also featured were one-on-one sessions for participants to discuss the process of technology transfer and establish strategic partnerships with NASA.

On the second day, Cleveland Mayor Frank Jackson reinforced sentiments expressed earlier in videos by Ohio's senators, and former senator John H. Glenn, regarding investing in technology not only for the sake of science and human exploration but also to boost the economy. The third day was devoted to STEM-related presentations and demonstrations to inspire high school and college student attendees.

"This venue offered Glenn technologists and NASA stakeholders from industry, academia and the U.S. government opportunities to rapidly partner on advancing technology development," said Dr. Robert J. (Joe) Shaw, deputy director of Glenn's Office of Technology Partnership and Planning. "It also set the groundwork for Glenn's long-term impact on the economic development of the region."

—By S. Jenise Veris

News and Events

Director Meets With Retirees ~



C-2012-5952

Photos by Bridget Caswell

Center Director Ray Lugo hosted a briefing for retirees on Dec. 10 to update them on NASA Glenn activities. Several senior staff members gave presentations in the areas of aerospace technology and strategic goals, budget and the Center Facility Master Plan. Before and after the presentations, retirees socialized with one another and senior staff and learned more about advancements in Glenn's core technologies at kiosks in the Briefing Center.



C-2012-5977



C-2012-5971

~ VIP Visits

In recent months, Glenn hosted a number of U.S. congressional and Ohio local and state officials, some of whom were first-time visitors. The visits are part of the center's strategy to enhance major stakeholders' understanding of NASA and Glenn's research and technology developed to support mission success. The visitors met with Center Director Ray Lugo and selected senior staff for an overview of the center, emphasizing Glenn's mission, workforce, budget and economic impact, followed by facility tours highlighting the center's work in aeronautics, space flight technology, communications and alternative energy. For some guests, the schedule also included a one-on-one visit with subject matter experts at the Briefing Center kiosks, highlighting Glenn core competencies and their applications to a wide range of research and technology development.

Pictured: (1) Cuyaboga County Executives on a tour in the Electric Propulsion Laboratory. (2) Sen. Rob Portman at the Small Multi-Purpose Research Facility. (3) Congresswomen (in blue) Loretta Sanchez and Marcy Kaptur, accompanied by Associate Director Janet Watkins, at the In-Space Propulsion kiosk in the Briefing Center; staffed by George Soulas and Diane Linne, Propulsion and Propellants Branch. (4) Twenty-six mayors from Northeast Ohio toured the Icing Research Tunnel.



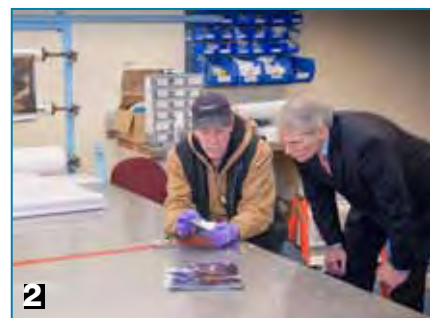
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Photo by Bridget Caswell



C-2012-6008

Photo by Christopher Lynch



C-2012-6184

Photo by Michelle Murphy



C-2012-5131

Photo by Marvin Smith

NASA Named

"Best Place to Work"

NASA was named the best place to work in the federal government among large agencies in a survey released by the Partnership for Public Service, nonprofit, nonpartisan organization. The Best Places to Work in the Federal Government® rankings draw on responses from nearly 700,000 civil servants to produce a detailed view of employee satisfaction and commitment across 362 federal agencies and subcomponents.



The majority of the data used to develop these rankings was collected from the Office of Personnel Management's Federal Employee Viewpoint Survey. The survey was administered April 2 through June 30, 2012, to full- and part-time permanent executive branch employees.





C-2012-3983



C-2012-2370



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2. Cryogenic Propellant Readiness

Glenn was part of a multicenter team that conducted a series of tests to mature cryogenic fluid management technologies to readiness level 5.

3. Small Business Innovation Research (SBIR)/Small Business Technology Transfer (STTR)

Glenn continues to lead the agency in lead subtopic roles. In the FY12 solicitation, we have 18 SBIR subtopics, two STTR subtopics, and one newly developed select subtopic, all aligned with Glenn's core competencies.

4. Combustion & Fluid Physics on ISS

Researchers in the Research and Technology Directorate completed eight combustion and fluid physics experiments on International Space Station that provided new scientific knowledge and new life images.

2012: YEAR IN REVIEW HIGHLIGHTS



C-2012-658



C-2012-1681



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5. Communications Extraordinaire

In February, the Glenn-developed Space Communication and Navigation (SCaN) Testbed left the center bound for Japan. In July, the testbed was launched to the space station onboard a Japanese transfer vehicle. The unit is up and operating!

6. B-2 Hydrogen Ready

The Plum Brook Management Office conducted the first thermal vacuum liquid hydrogen test at the Spacecraft Propulsion Research Facility (B-2) in over a decade.

7. Safely Decommissioning a Reactor

The center completed the 12-year long Nuclear Reactor Decommissioning project for the Plum Brook Reactor Facility and received the Site License Termination from the Nuclear Regulatory Commission in November.

Utilities Cost Savings

The Office of the Chief Counsel settled the City of Cleveland Water Department's claim for \$2.4 million in past water charges for a one-time payment of \$500,000 that will also result in an estimated continued cost avoidance of \$180,000 per year in future water charges to Lewis Field.



C-2012-1718

8. Travel and Purchase Consolidation

In April, the Office of the Chief Financial Officer oversaw the launching of the first wave to consolidate travel request and purchase requisition functions. The initiative, completed in September, was implemented to promote efficiencies.

9. Creativity Spurs Diversity & Inclusion

The Office of Diversity and Equal Opportunity collaborated with the Creativity and Innovation team to develop a Diversity and Inclusion action plan. This plan will help formulate the center's Diversity and Inclusion Strategic Plan.

10. Emmy Award

In June, the Glenn-based team of producers earned an Emmy Award from the National Academy of Television Arts and Sciences—Lower Great Lakes Chapter for “NASA Now,” the online video series for the Explorer Schools Project, under the Center Operations Directorate.

11. Technology Roadmaps

Last spring, with significant leadership from Glenn, the agency finalized 14 Space Technology area roadmaps that identify each technology area's top challenges, then posted the final roadmaps to the Office of Chief Technologist website.



C-2012-2871



12. Sharing the NASA Mission

The center conducted a number of major outreach events in 2012 to provide information aimed at increasing the NASA's visibility and contributing to scientific literacy. Some of the most significant events included the 50th Anniversary of John Glenn's Flight, the Transit of Venus, the Space Communications and Navigation Testbed launch and the Mars Curiosity Rover landing.

13. Enhanced Mobile Learning

The Office of Human Capital Management led the center in successfully implementing the SATERN 6.4 upgrade offering major benefits in mobile learning, user-friendly navigation and improved search functionality.



14. IT Service Provider Transition

During the transition to the ACES contract, the Office of the Chief Information Officer replaced 1900 desktop and laptop computers, replacing more than half of the legacy hardware with new computers.



C-2012-3745

Improved S&MA Curriculum

The NASA Safety Center rolled out the cross-discipline and leadership curriculums for the Safety and Mission Assurance Technical Excellence Program (STEP) in July 2012 to better meet the developmental goals of the professionals in safety and mission assurance.

15. HECC Program Milestone

The Aeronautics Research Office reached a center level milestone in the High-Efficiency Centrifugal Compressor (HECC) program by completing performance testing of state-of-the-art centrifugal compressor stage in the refurbished CE-18 test cell.

Retirements



Bagnell



Conrad



Edwards

Laura Bagnell, Logistics and Technical Information Division, Center Operations, retired Dec. 29, 2012, with 37 1/2 years of NASA service.

Kurt Brocone, Exploration Systems Branch, Procurement Division, retired Dec. 29, 2012, with 35 1/2 years of federal service, including 32 1/2 with NASA.

Russell Claus, Multidisciplinary Design Analysis Optimization Branch, Aeropropulsion Division, retired Dec. 31, 2012, with 39 years of NASA service.

Dennis Conrad, Human Capital Development Division, Office of Human Capital Management, retired Jan. 3, 2013, with 42 years of federal service, including 32 with NASA.

John DeLaat, Controls and Dynamics Branch, Communications, Instrumentation and Controls Division, retired Dec. 1, 2012, with 35 1/2 years of NASA service.

Daryl Edwards, Fluid Systems Branch, Mechanical & Fluid Systems Division, retired Jan. 3, 2013, with 39 years of federal service, including 33 with NASA.

Susan Print, Center Operations Support Branch, Mission Support and Integration Division, retired Dec. 31, 2012, with 31 1/2 years of NASA service.

George Readus Jr., Space Power & Propulsion, Communication and Instrumentation Branch, Testing Division, retired Dec. 29, 2012, with 36 years of NASA service.

Awards, Honors and Promotions



C-2012-5890

Photo by Michelle Murphy

History Book Signing

Bob Arrighi/WYLE/Logistics and Technical Information Division, NASA Glenn's archivist and author of the book "Pursuit of Power," discussed highlights and signed a complementary book for employees at Glenn's Science and Engineering Library on Nov. 19. Arrighi's book details the history of Glenn's Propulsion Systems Laboratory No. 1 and 2, which, from 1952

to 1979, served as one of the nation's most important ground-based engine research facilities for testing full-scale engines at simulated flight altitudes.

Glenn/SAIC Team Wins Design-Build Award

The Design-Building Institute of America (DBIA) presented NASA Glenn and the Science Application International Corporation (SAIC) a national award in Industrial/Process/Research Facilities for their advanced design-build project delivery at the 2012 Design-Build Conference and Exposition, Nov. 7-9 in New Orleans. NASA's Vibro-Acoustic Test Capability (VTC) facility, a major component of the Space Environment Test (SET) Project, was selected for its technical difficulties and excellence. Glenn employees Carol Ginty, SET project manager and COTR; Susan Motil, former SET project manager; and Damian Ludwiczak, SET chief engineer; and SAIC employees Dr. Dennis Nihiser and David Absher accepted the award.



Pictured with the award, left to right: Dr. Nihiser, Motil, Ginty, Ludwiczak and Absher.

Coming in Spring 2013!

Phase Two of the New Glenn Visitor Center

Attention visitors—the Great Lakes Science Center in downtown Cleveland recently began renovating its space galleries. During the construction period, please be aware that areas of the NASA Glenn Visitor Center will be closed. The highly anticipated second phase of the new NASA Glenn Visitor Center will open on March 30 and feature new hands-on exhibits, artifacts, videos and more. Watch *Today@Glenn* for future updates and announcements about this renovation project.



C-2011-03786

Photo by Marvin Smith

STS-135 crew at the NASA Glenn Visitor Center at the Great Lakes Science Center.

Emergency and Inclement Weather Lines

Lewis Field: 216-433-9328 (WEAT)
Plum Brook Station: 419-621-3333

In Memory

John E. Butauski, 63, who retired in 2009 with 18 years of NASA service, passed away Nov. 22. Butauski was a veteran of the U.S. Marine Corps, before joining the NASA workforce. He graduated the Lewis Trades Apprentice Program in 1995 and served as a research laboratory mechanic in the 10- by 10-Foot Supersonic Wind Tunnel and Aero-Acoustic Propulsion Laboratory. In 2000, Butauski was one of several technicians honored following a detail to NASA Stennis for the "build-up and installation of electrical boxes for an upcoming Integrated Powerhead Demonstrator; assistance in setup for the Hybrid Sounding Rocket test program; and buildup and fabrication of the Master Facility Panel, critical to tests on FASTRAC, a NASA test model rocket engine program."

Peter M. Getz, 91, who retired in 1974 with 22 years of federal service and was a decorated U.S. Army veteran of World War II, died Oct. 17. He joined NACA/NASA in 1954 and served as group leader in the Erection & Repair Section of Facilities Operations Division, responsible for installation of research support hardware and general maintenance. Eleven years prior to retiring, Getz was as a production controller in the Technical Services Coordination Office.

Charles F. Hnatek, 81, who retired in 1987 with 33 years of NASA service, died Nov. 30. Hnatek was a U.S. Air Force veteran who entered the Lewis Trades and Apprentice Program and graduated in 1959 as a flight propulsion mechanic. He was a member of the Test Installation Division that supported facility preparation and fan stage operations for the Vertical and/or short take-off and landing (V/STOL) aircraft research.



Hnatek



Mirtich

Michael J. Mirtich, 76, who retired in 1994 with 35 years of NASA service, died Oct. 24. Mirtich was a distinguished research physicist, who served in the Electro-Physics Branch of the Power Technology Division. He was a co-inventor of two prominent Glenn-developed and commercially successful transferred technologies. In 1984, he shared a patent with Bruce Banks, chief of Electro-Physics, and James Sovey for a "Process for Deposition of Diamondlike Carbon Films" that was licensed and modified as The DiamondHard® technology applied to the lens of the Ray-Ban® Survivors® Collection sunglasses. The lenses are manufactured and marketed by Bausch & Lomb, Inc. The coatings make them 10 times more scratch-resistant than conventional glass lenses. In 1987, Mirtich shared another patent with the same team for "Oxidation Protection Coatings for Polymers." Later, Glenn researcher Sharon Miller joined the team and they developed a solar array blanket protection technology that represented a breakthrough in polymers used as thermal and structural blankets on spacecraft to retain their properties during long periods of exposure to the atomic oxygen in low-Earth orbit. The coatings were then applied to

the solar array blankets used on the International Space Station as well as the U.S.-supplied solar array used on Russia's Mir Space Station.

Frank E. Rom, Sr., 86, who retired from NASA in 1973 with 25 years of service, died Nov. 4. Rom was a U.S. Navy veteran of World War II, who joined the NACA/NASA workforce 1948. He was a scientist who had a lengthy career in nuclear propulsion. Rom was one of NASA's pioneers who designed the NASA Plum Brook Reactor Facility. He was instrumental in the development of applications of nuclear energy for research and alternative technologies. Rom authored numerous scientific papers and articles and held several patents on gas-core nuclear propulsion systems and related technologies. He is featured in the "Ashes and Atoms" documentary NASA produced about the Plum Brook Reactor.



Rom

Rom was a member of several aviation and aerospace societies. After his retirement, he continued in the field and funded Rom-Aire Solar Corporation based on his patented designs.

Arthur H. Schultz 87, who retired in 1974 with 20 years of NASA service, died Nov. 24. Schultz was a U.S. Air Force veteran of World War II who joined the NACA/NASA workforce in 1954. He was a mechanical engineer who served primarily as a project engineer for several programs and the design of facilities. Schultz retired from the Wind Tunnel and Flight Division, but the bulk of his career was spent with the Facilities Operations and Maintenance Division. He also was an active member of the Speaker's Bureau.

Calendar

IFPTE LOCAL 28, LESA MEETING: LESA will hold its next membership meeting on Wednesday, Feb. 13 at noon in the Employee Center's Small Dining Room.



Article Submissions

News items and brief announcements for publication in the February issue is noon, Jan. 18. Larger articles require at least one month notice.

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Award
2009-
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GRC's Got Talent!

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Congratulations to: Don Reames, WYLE/Logistics and Technical Information Division, for taking first place with his humorous violin medley of holiday songs; George Crawford, Counterintelligence and Counterintelligence, as the second place winner with his rendition of Garth Brooks' "The Thunder Rolls;" and the "Take 3" trio of Sylvia Merritt and Stephanie Brown-Houston, Educational Programs Office, and Dr. Dexter Johnson, Structural Systems Dynamic Branch, who garnered third place for their spirited version of "Miracle" by the gospel group The Clark Sisters.

The popular "NASA Jam Band" kept the event lively, which concluded with a social featuring light refreshments.



Pictured, clockwise from top: First place winner Reames • Second place winner Crawford • MC Foster • Employees pop up for Glenn's rendition of a Twelve Days of Christmas Flash Mob • Center Director Lugo jams with The NASA Jam Band • Santa joins in on the fun • Third place winners Merritt, Brown-Houston and Dr. Johnson.



C-2012-6139



C-2012-6131



C-2012-6134



C-2012-6108



C-2012-6145



C-2012-6160



C-2012-6152

Photos by Michelle Murphy